

## MINUTES OF DOT-AGC BRIDGE DESIGN SUBCOMMITTEE MEETING

The DOT-AGC Joint Bridge Design Subcommittee met on September 18, 2000. Those in attendance were:

Tim Rountree	State Bridge Design Engineer (Co-Chairman)
Berry Jenkins	Manager of Highway Heavy Division, Carolinas Branch AGC (Co-Chairman)
Ron Shaw	Lee Construction Company of Carolinas
Larry Cagle	Thompson-Arthur Paving Co.
Kevin Burns	R. E. Burns & Sons Co.
Greg Nelson	S. T. Wooten
Mike Cowan	Deputy Division Engineer – Division 7
Ellis Powell	State Bridge Construction Engineer
Greg Perfetti	Assistant State Bridge Design Engineer
Paul Lambert	Structure Design Project Engineer
Rob Woodruff	Structure Design Project Engineer
John Ledbetter	State Soils & Foundations Engineer
Nariman Abar	Soils and Foundation Engineer
Jamey Batts	Soils and Foundation Engineer
Rodger Rochelle	Structure Design Project Design Engineer (Secretary)

The following items of business were discussed:

1. The minutes of the July 17, 2000 meeting were accepted.
2. *Pile Tonnage*

Mr. Rochelle reported on a recent policy change to allow 50 tons on 10" steel piles for the end bents of cored slab bridges and select bridge replacement projects. A plan note is used to allow the Contractor to substitute 12" steel piles for the 10" piles at no additional cost to the Department. The bents will be detailed to accommodate 12" steel piles and no changes in the field or plan revision will be necessary for the substitution.

3. *Camber Growth of Prestressed Concrete Girders*

Mr. Woodruff stated that there is nothing new to report on this topic. Data from only two bridges has been submitted. This data is inconclusive and even suspect. No data has been submitted from Manteo Bypass to date.

4. *Shoring Review Process*

At the request of the Contractors, Mr. Lambert compiled and distributed a summary of items typically checked in the submittal of temporary shoring. Mr. Cagle stated that this list is useful and that the intent to provide borings at temporary shoring locations will be of further benefit.

Mr. Rochelle distributed a recent policy memo regarding the use of culvert wings as temporary shoring for culvert extensions. If approved by the Engineer, the existing culvert wings may be used in lieu of temporary shoring provided the floor slab of the culvert extension is poured prior to cutting the wings.

## 5. *Hauling Restrictions*

The construction hauling restrictions in the Standard Specifications will be revisited prior to the release of the new edition. These restrictions have the greatest effect when hauling over long bridges.

## 6. *Other*

### i. *Joint Submittals for Shoring and Walls*

Mr. Perfetti addressed five ways currently being explored to increase the likelihood of joint submittals being returned in 40 days. The Contractors present endorsed implementation of these ideas on a trial basis.

Mr. Ledbetter proposed relaxing the requirement for temporary shoring on a statewide basis from 2:1 to 1½:1 slopes intersecting no closer than 5 feet for the edge of pavement. This topic can be addressed at each final field inspection. Concerns regarding shoulder erosion and the uncertainty of quality material in the eastern part of the state were raised.

Mr. Perfetti introduced the idea of placing standard shoring designs in the contract plans to eliminate need for some submittals. Standard designs and drawings would be created for heights between 4 and 18 feet. The Contractor would be allowed to deviate from these designs, provided they are submitted for review. Standards would include tie-back situations where penetration is not achievable. Mr. Ledbetter will provide status updates on the generation of these standards at subsequent meetings.

Mr. Perfetti suggested that the need for noisewall submittals to Raleigh may be eliminated by providing more details on the contract plans. It was proposed to require the Contractor to verify the groundline survey along the wall. The Contractors present thought this idea to be appropriate only for jobs requiring contract surveying. Tiedback and soil nail walls will typically be designed and detailed in the contract plans. This will eliminate engineering disagreements during review.

An effort will be made to avoid duplication of efforts between Units and streamline the review process for large projects with multiple MSE wall submittals. Increasing the review time to 50 days to requiring the Contractor to prioritize these submittals was also discussed. The Contractors present were not in favor of lengthening the review time to 50 days.

ii. *End Bent Waiting Periods*

Mr. Cagle expressed concern over the note requiring a 3 month waiting period prior to construction of the end bent. This delay can create a hardship particularly for small bridge replacement projects.

iii. *Long Span Prestressed Girders*

Mr. Cagle reported increasing use of long span prestressed girders where steel girders would be easier to construct.

iv. *Top-down Construction*

Mr. Nelson reported that a current project requires top-down construction of a cored slab bridge but that the spans are too long for economical construction. The length of the spans requires a crane heavier than what will be allowed on the bridge. It was recommended that spans be limited to 40 feet in these instances. This limit applies when steel piles are used and should be reduced further if concrete piles are required. Structure Design Will investigate this concern.

v. *Needle Beams*

Mr. Lambert stated that recent policy disallows the use of needle beams unless otherwise required by the plans. The Contractors agreed that needle beams are typically not used unless required by the Department.

vi. *Announcements*

Mr. Jenkins reported that Mr. Michael Dane of Dane Construction will be replacing Mr. Cagle on the Committee beginning in October.

Mr. Powell announced the recent promotion of Mr. John Rouse to Area Bridge Engineer for Divisions 1, 2, and 4.

Mr. Rountree announced Mr. Ledbetter's retirement effective November 1, 2000.